

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1058316

Luminaire Tested: S122RDR-H290D927-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058316
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-56)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDR-H290D927-X4F0-XX-UDD-SVL-W
Description: DEFINE 2 WHITE REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

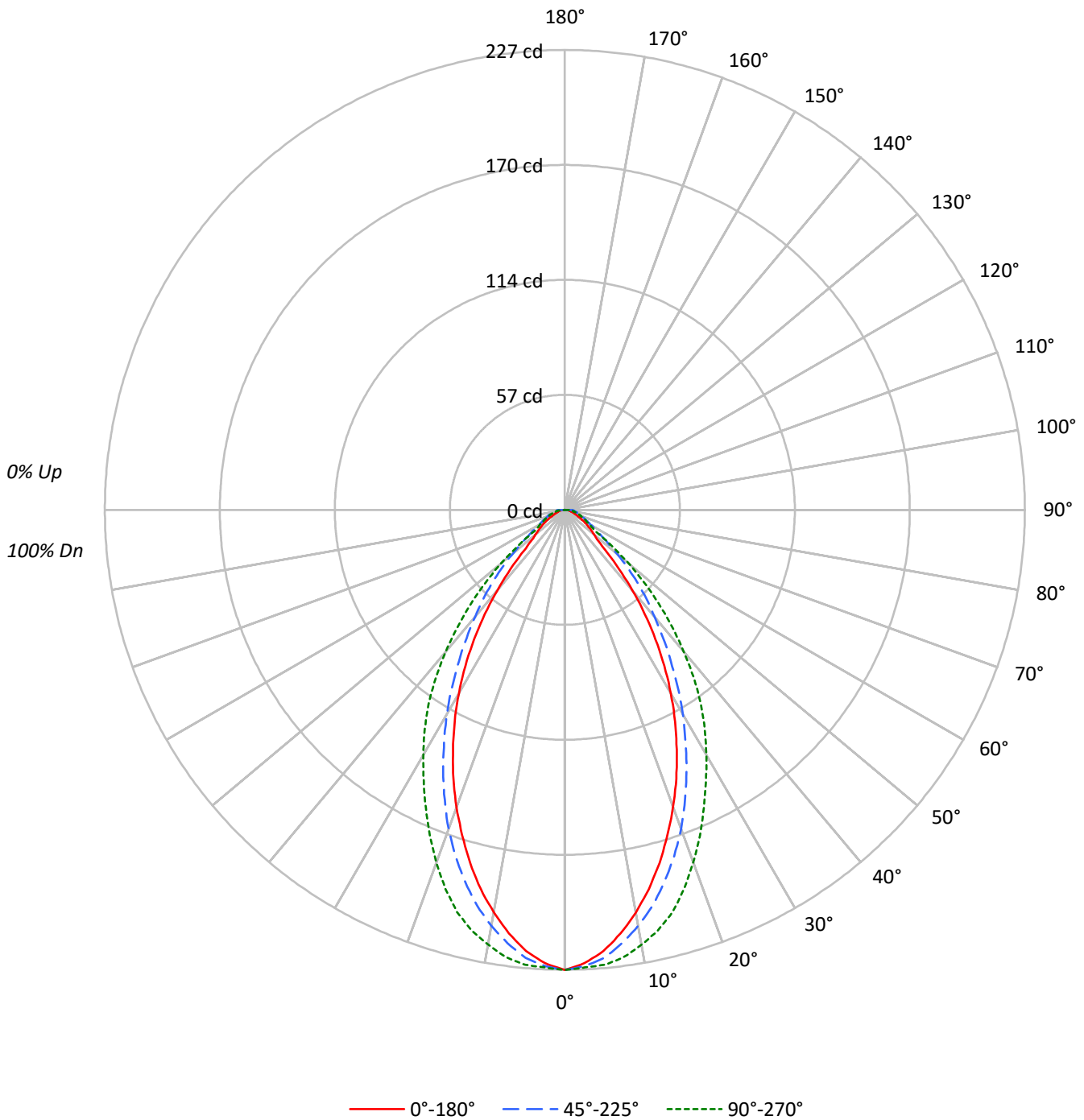
Lumens per Lamp: N/A
Luminaire Lumens: 275.4 lumens
Efficiency: N/A
Efficacy: 23.5 lumens/watt
Spacing Criteria (0/90/45): 0.83 / 0.98 / 0.95
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RF | 20 | | | | 20 | | | | 20 | | | | 20 | | | | 20 | |
| RC | 80 | | | | 70 | | | | 50 | | | | 30 | | | | 10 | 0 |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 111 | 108 | 105 | 102 | 109 | 106 | 103 | 100 | 102 | 99 | 97 | 98 | 96 | 94 | 94 | 93 | 91 | 89 |
| 2 | 104 | 98 | 93 | 88 | 102 | 96 | 91 | 87 | 93 | 89 | 85 | 90 | 86 | 84 | 87 | 84 | 82 | 80 |
| 3 | 97 | 89 | 83 | 78 | 95 | 88 | 82 | 77 | 85 | 80 | 76 | 83 | 78 | 75 | 80 | 77 | 74 | 72 |
| 4 | 91 | 82 | 75 | 70 | 89 | 81 | 74 | 69 | 78 | 73 | 68 | 76 | 71 | 68 | 74 | 70 | 67 | 65 |
| 5 | 86 | 75 | 68 | 63 | 84 | 74 | 68 | 63 | 72 | 67 | 62 | 71 | 65 | 61 | 69 | 64 | 61 | 59 |
| 6 | 80 | 70 | 62 | 57 | 79 | 69 | 62 | 57 | 67 | 61 | 57 | 66 | 60 | 56 | 64 | 59 | 56 | 54 |
| 7 | 76 | 65 | 57 | 52 | 74 | 64 | 57 | 52 | 62 | 56 | 52 | 61 | 56 | 52 | 60 | 55 | 51 | 50 |
| 8 | 71 | 60 | 53 | 48 | 70 | 59 | 53 | 48 | 58 | 52 | 48 | 57 | 52 | 48 | 56 | 51 | 47 | 46 |
| 9 | 67 | 56 | 49 | 45 | 66 | 56 | 49 | 45 | 55 | 49 | 44 | 54 | 48 | 44 | 53 | 48 | 44 | 42 |
| 10 | 64 | 53 | 46 | 41 | 63 | 52 | 46 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 50 | 45 | 41 | 39 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 4191 | 4191 | 4191 |
| 5° | 4049 | 4112 | 4175 |
| 10° | 3781 | 3907 | 4085 |
| 15° | 3448 | 3630 | 3926 |
| 20° | 3067 | 3293 | 3637 |
| 25° | 2659 | 2893 | 3304 |
| 30° | 2229 | 2480 | 2977 |
| 35° | 1755 | 2052 | 2638 |
| 40° | 1253 | 1657 | 2202 |
| 45° | 739 | 1313 | 1709 |
| 50° | 534 | 950 | 1163 |
| 55° | 444 | 685 | 586 |
| 60° | 362 | 546 | 498 |
| 65° | 293 | 485 | 458 |
| 70° | 254 | 475 | 437 |
| 75° | 242 | 478 | 435 |
| 80° | 255 | 574 | 468 |
| 85° | 360 | 932 | 572 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 1709 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 20.8 | 7.6 |
| 10°-20° | 53.5 | 19.4 |
| 20°-30° | 66.0 | 24.0 |
| 30°-40° | 58.7 | 21.3 |
| 40°-50° | 37.5 | 13.6 |
| 50°-60° | 18.0 | 6.5 |
| 60°-70° | 10.6 | 3.8 |
| 70°-80° | 6.7 | 2.4 |
| 80°-90° | 3.6 | 1.3 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 140.3 | 51.0 |
| 0°-40° | 199.1 | 72.3 |
| 0°-60° | 254.5 | 92.4 |
| 0°-90° | 275.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 275.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 227 | 227 | 227 | 227 | 227 | |
| 5° | 219 | 223 | 222 | 223 | 225 | 20 |
| 15° | 180 | 185 | 190 | 199 | 206 | 50 |
| 25° | 131 | 136 | 142 | 152 | 162 | 60 |
| 35° | 78 | 84 | 91 | 105 | 117 | 48 |
| 45° | 28 | 37 | 50 | 58 | 66 | 24 |
| 55° | 14 | 18 | 21 | 21 | 18 | 12 |
| 65° | 7 | 12 | 11 | 10 | 10 | 7 |
| 75° | 3 | 7 | 7 | 6 | 6 | 4 |
| 85° | 2 | 4 | 4 | 4 | 3 | 2 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 227.1 | 227.1 | 227.1 | 227.1 | 227.1 |
| 2.5° | 224.0 | 227.8 | 225.4 | 225.4 | 226.1 |
| 5° | 218.6 | 222.7 | 222.0 | 223.4 | 225.4 |
| 7.5° | 210.9 | 215.3 | 215.9 | 219.7 | 222.7 |
| 10° | 201.8 | 206.5 | 208.5 | 213.9 | 218.0 |
| 12.5° | 191.7 | 196.4 | 200.1 | 206.8 | 212.6 |
| 15° | 180.5 | 184.9 | 190.0 | 198.7 | 205.5 |
| 17.5° | 168.4 | 174.1 | 179.2 | 188.3 | 196.0 |
| 20° | 156.2 | 161.6 | 167.7 | 176.5 | 185.2 |
| 22.5° | 143.7 | 148.8 | 154.9 | 164.0 | 174.1 |
| 25° | 130.6 | 135.6 | 142.1 | 152.2 | 162.3 |
| 27.5° | 117.8 | 122.8 | 128.9 | 140.0 | 150.8 |
| 30° | 104.6 | 109.7 | 116.4 | 127.9 | 139.7 |
| 32.5° | 91.4 | 96.8 | 103.6 | 116.1 | 128.6 |
| 35° | 77.9 | 84.0 | 91.1 | 104.9 | 117.1 |
| 37.5° | 64.8 | 70.9 | 79.6 | 93.1 | 104.6 |
| 40° | 52.0 | 59.0 | 68.8 | 81.0 | 91.4 |
| 42.5° | 39.5 | 47.2 | 59.4 | 69.2 | 78.3 |
| 45° | 28.3 | 36.8 | 50.3 | 58.4 | 65.5 |
| 47.5° | 21.6 | 27.7 | 41.5 | 47.9 | 53.0 |
| 50° | 18.6 | 22.3 | 33.1 | 37.8 | 40.5 |
| 52.5° | 16.2 | 19.6 | 26.3 | 28.7 | 28.7 |
| 55° | 13.8 | 17.9 | 21.3 | 20.6 | 18.2 |
| 57.5° | 11.8 | 16.2 | 17.5 | 14.8 | 15.5 |
| 60° | 9.8 | 14.8 | 14.8 | 13.2 | 13.5 |
| 62.5° | 8.1 | 13.8 | 12.8 | 11.5 | 11.8 |
| 65° | 6.7 | 12.1 | 11.1 | 10.1 | 10.5 |
| 67.5° | 5.4 | 10.8 | 9.8 | 9.1 | 9.1 |
| 70° | 4.7 | 9.8 | 8.8 | 8.1 | 8.1 |
| 72.5° | 4.0 | 8.4 | 7.8 | 7.1 | 7.1 |
| 75° | 3.4 | 7.4 | 6.7 | 6.4 | 6.1 |
| 77.5° | 3.0 | 6.4 | 6.1 | 5.4 | 5.1 |
| 80° | 2.4 | 5.4 | 5.4 | 5.1 | 4.4 |
| 82.5° | 2.0 | 4.7 | 4.7 | 4.4 | 3.7 |
| 85° | 1.7 | 4.0 | 4.4 | 3.7 | 2.7 |
| 87.5° | 1.3 | 3.7 | 3.7 | 3.0 | 2.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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CIE UGR TABLE:

| Reflectances: | | | | | | | | | | | |
|-----------------|------|------------------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|
| Ceiling | | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 |
| Wall | | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 |
| Reference plane | | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Room dimensions | | Viewed crosswise | | | | | Viewed endwise | | | | |
| X=2H | Y=2H | 6.65 | 7.93 | 7.01 | 8.24 | 8.55 | 6.42 | 7.70 | 6.79 | 8.01 | 8.33 |
| | 3H | 7.88 | 9.02 | 8.26 | 9.35 | 9.71 | 8.02 | 9.16 | 8.40 | 9.49 | 9.85 |
| | 4H | 8.33 | 9.39 | 8.73 | 9.74 | 10.13 | 8.74 | 9.80 | 9.15 | 10.15 | 10.54 |
| | 6H | 8.71 | 9.68 | 9.13 | 10.06 | 10.45 | 9.40 | 10.38 | 9.82 | 10.75 | 11.14 |
| | 8H | 8.86 | 9.79 | 9.29 | 10.18 | 10.58 | 9.73 | 10.65 | 10.16 | 11.04 | 11.45 |
| | 12H | 9.02 | 9.90 | 9.45 | 10.29 | 10.72 | 10.03 | 10.91 | 10.46 | 11.29 | 11.72 |
| 4H | 2H | 7.19 | 8.25 | 7.60 | 8.60 | 8.99 | 7.02 | 8.07 | 7.42 | 8.42 | 8.81 |
| | 3H | 8.89 | 9.76 | 9.30 | 10.17 | 10.57 | 8.86 | 9.73 | 9.27 | 10.14 | 10.54 |
| | 4H | 9.68 | 10.47 | 10.12 | 10.89 | 11.33 | 9.74 | 10.52 | 10.17 | 10.94 | 11.38 |
| | 6H | 10.33 | 11.00 | 10.79 | 11.45 | 11.92 | 10.59 | 11.27 | 11.05 | 11.71 | 12.18 |
| | 8H | 10.57 | 11.21 | 11.04 | 11.66 | 12.13 | 11.02 | 11.65 | 11.49 | 12.10 | 12.57 |
| | 12H | 10.82 | 11.38 | 11.31 | 11.86 | 12.34 | 11.42 | 11.98 | 11.90 | 12.46 | 12.93 |
| 8H | 4H | 10.10 | 10.74 | 10.57 | 11.18 | 11.65 | 10.16 | 10.79 | 10.63 | 11.24 | 11.71 |
| | 6H | 11.08 | 11.60 | 11.58 | 12.10 | 12.58 | 11.25 | 11.77 | 11.75 | 12.27 | 12.75 |
| | 8H | 11.57 | 12.03 | 12.09 | 12.55 | 13.04 | 11.84 | 12.31 | 12.37 | 12.83 | 13.32 |
| | 12H | 12.06 | 12.48 | 12.58 | 12.97 | 13.54 | 12.44 | 12.86 | 12.96 | 13.35 | 13.92 |
| 12H | 4H | 10.17 | 10.73 | 10.66 | 11.21 | 11.69 | 10.23 | 10.79 | 10.72 | 11.27 | 11.75 |
| | 6H | 11.25 | 11.72 | 11.77 | 12.23 | 12.72 | 11.41 | 11.88 | 11.94 | 12.40 | 12.89 |
| | 8H | 11.88 | 12.29 | 12.40 | 12.79 | 13.36 | 12.13 | 12.54 | 12.64 | 13.04 | 13.61 |